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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,779	09/27/2000	Paul D. Daly	99P7948US 60426-81	6743

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SIEMENS CORPORATION
INTELLECTUAL PROPERTY LAW DEPARTMENT
170 WOOD AVENUE SOUTH
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EXAMINER

PENDLETON, BRIAN T

ART UNIT	PAPER NUMBER
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2644

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DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/670,779

Applicant(s)

DALY, PAUL D.

Examiner

Brian T. Pendleton

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

Applicant's arguments, see pages 1 and 2 of Paper No. 7, filed 2/14/04, with respect to the rejection(s) of claim(s) 1, 4-7 and 9 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art reference to Blind et al.

The indicated allowability of claims 2, 3, 8 and 10 is withdrawn in view of the newly discovered reference(s) to Yoshida et al. Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 4-7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blind et al in view of Reighard et al. Blind et al teach a vehicle sound system comprising audio source 20, active noise cancellation module 22 which has incorporates a control for determining a cancellation function and is coupled to speaker 32. The module 22 receives reference signals 38 and error signals 40. Blind et al do not teach that the active noise cancellation system is combined with a horn switch, the switch being actuated by an operator and emitting a horn sound through the active noise cancellation speaker. However Blind et al suggested in column 1 lines 26-38, that it was desirable to consolidate an active noise cancellation system with the audio

entertainment reproduction system of a vehicle. The advantage of using that teaching was to simplify DSP components. Therefore, the general teaching was established to combine an active noise cancellation system with another vehicle sound component. This teaching also was beneficial because it saved space in a vehicle and negated to use of separate speakers for audio reproduction and noise cancellation. Since it was well known that the horn of an automobile uses a speaker, as evidenced by Reighard et al, which taught a switch 50 and speaker 85, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the horn of Reighard et al in the system described by Blind et al. The combination would comprise a switch actuated by a vehicle's user, an active noise cancellation system and speaker, whereby a horn sound is emitted by the speaker of the ANC system. Claims 1 and 7 are met. As to claims 4 and 9, at the time of invention, inherently horns were actuated when the vehicle key was in the "on" or "off" position. Regarding claim 5, the combination comprises a horn sound source in a noise cancellation environment. Reighard et al do not teach any restrictions on the horn use, therefore the horn sound would be reproduced when the key is at the "on" position and regardless of the operation of the noise cancellation system. Per claim 6, inherently there is a CODEC in the ANC module 22 of Blind et al.

Claims 2, 3, 8, and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blind et al in view of Reighard et al as applied to claims 1 and 7 above, and further in view of Yoshida et al. The combination of Blind et al and Reighard et al teach an active noise cancellation system having a speaker which also emits a

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horn sound when a horn switch is actuated by an operator of a vehicle. The combination does not disclose that the control in the active noise cancellation system is provided with a pause routine to pause canceling when a request for a horn actuation is received. Yoshida et al teach a noise cancellation system. In column 7 lines 49-58, it was suggested that during periods of voice, the adaptive filter was paused and noise cancellation was paused. During periods of silence, cancellation was restarted. Thus, it was taught that when the desirable signal is present, noise cancellation should cease. It would have been obvious to one of ordinary skill in the art at the time of invention to use the teaching of Yoshida et al in the combination of Blind et al and Reighard et al. The advantage of the pause feature in Yoshida et al would ensure that the horn signal could be heard over the noise counterwave. Claims 2 and 8 are met. Per claim 3, inherently the speaker would be actuated to emit a horn sound during a horn switch actuation. Regarding claim 10, the combination of Blind et al, Reighard et al and Yoshida et al meet all the limitations. An ANC controller, speaker, horn switch, and control based on ignition and a pause routine are all present in the combination.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.



Brian Tyrone Pendleton
April 19, 2004



MINSUN OH HARVEY
PRIMARY EXAMINER